THE NATURE CONSERVANCY NEWS

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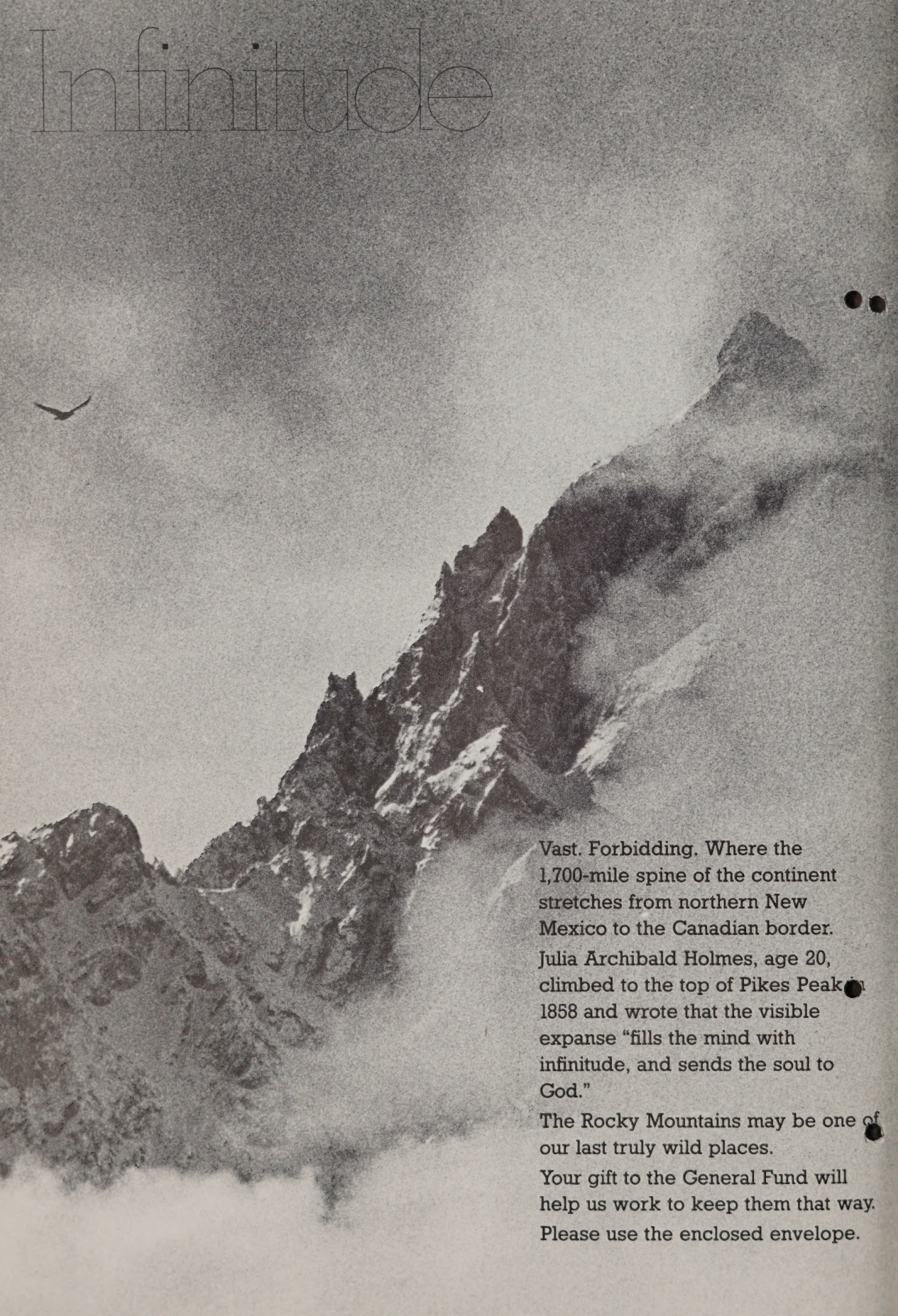
January/February 1979

THE ROCKY MOUNTAINS

Infinitude



Vast. Forbidding. Where the 1,700-mile spine of the continent stretches from northern New Mexico to the Canadian border.

Julia Archibald Holmes, age 20, climbed to the top of Pikes Peak in 1858 and wrote that the visible expanse "fills the mind with infinitude, and sends the soul to God."

The Rocky Mountains may be one of our last truly wild places.

Your gift to the General Fund will help us work to keep them that way.

Please use the enclosed envelope.

THE NATURE CONSERVANCY NEWS

VOLUME 29, NUMBER 1
JANUARY/FEBRUARY, 1979

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COVER: Rocky Mountain landscape, Colorado. Photo by Susan Bournique.

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The Nature Conservancy

The Nature Conservancy is a national conservation organization committed to the preservation of natural diversity by protecting lands containing the best examples of all components of our natural world.
To date the Conservancy and its members have been responsible for the preservation of 1,395,329 acres of forests, marshes, prairies, mountains, and islands: home to rare and endangered species of wildlife and plants. 2,036 projects have been completed since the acquisition of the first preserve in 1954. Approximately 60% of all preserves are retained by the Conservancy and managed by volunteer land stewards.
A membership, non-profit organization, the Conservancy was incorporated in 1951 in the District of Columbia for scientific and educational purposes.

A copy of the last financial report filed with the Department of State may be obtained by writing to: New York State, Department of State, Office of Charities Registration, Albany, New York 12231, *or* The Nature Conservancy, 1800 North Kent Street, Arlington, Virginia 22209.

The Nature Conservancy in the Rockies

by G. Jon Roush

It is hard to believe that the Rocky Mountain states—Colorado, Idaho, Montana, New Mexico, Utah, Wyoming—are in trouble. True, Denver, Salt Lake City, Colorado Springs, and several lesser cities are hell-bent on aping every other smog-ridden, unmanageable American city. True, second homes, retirement homes, and commuter homes are disfiguring some of America's most beautiful valleys, whose names evoke a more primitive past: the Rio Grande in New Mexico; the Colorado, Platte and Gunnison in Colorado; the Great Salt Lake basin; Wyoming's Powder River, Sweetwater River and Jackson Hole; the Snake and lower Salmon in Idaho; the Bitterroot, Flathead and Gallatin valleys in Montana. Such valleys seem doomed under our national compulsion to destroy what we came for. And true also, coal mines in Montana, Wyoming, Colorado and New Mexico pock the landscape, drain the rivers, bring boom-town problems to unprepared communities and promise worse to come.

Yet, in another perspective, the problems seem not to loom so large. Containing 18 per cent of the land area of the 48 contiguous states but only 3 per cent of the population, the Rocky Mountain region is hardly overpopulated compared with other parts of the U. S. Although on a smoggy day you can not see the mountains 10 miles west of Denver, they are still there. Like the rest of the Rockies, they still secure vast areas of wilderness that seem unchanged since the first trapper ventured there a century and a half ago. Eastern Montana, Wyoming, Colorado and New Mexico still support millions of acres of unplowed grasslands. Desert plants still bloom and desert animals still scurry and burrow across millions of forbidding acres in New Mexico, Colorado and Utah. Moreover, in every one of the six states, more than 40 per cent of the land is in public ownership. The U. S. Forest Service alone controls almost 220,000 square miles. With so much "vacant" land and so much of that already "protected," why worry?

The region's vastness invites arguments based on such huge numbers. Meanwhile, however, extinction threatens certain species and isolated examples of rare natural systems, as if we could not see the trees for the forest.

We should worry about rare species and other elements of the Rockies' natural diversity because we often do not know what or where they are and because our mechanisms for protecting them are crude and often inappropriate. For years, for example, Rocky Mountain naturalists have heatedly debated the status of the grizzly bear—whether it is in danger, of what sort and how much, and what should be done. Citizens in the region take

an unusual interest in these arguments, because hundreds of thousands of acres of timberland, and the jobs they might support, are at stake. Yet reliable answers seem as scarce as the bears.

The major problems were highlighted during hearings held by the Forest Service as part of the RARE II process. "RARE II" is an acronym for the Forest Service's second Roadless Area Review and Evaluation, which will decide the future of more than 62 million acres of roadless land, 28 million of which are in the Rocky Mountain states. In the hearings, the battle lines were familiar—economics vs. environment—and much of the argument turned on questions of fact. How much merchantable timber *really* is in a disputed area? What is it *really* worth? What natural features or habitats are found there and how much land is *really* needed to protect them? Or are they *really* protected adequately elsewhere?

In fact, as the hearings progressed, the reliability of official facts and figures itself became an issue. Groups on several sides of the question accused the Forest Service of preparing faulty environmental impact statements. But in some respects, the Forest Service was dealt an impossible hand from the beginning. Probably the only systems more complex than economic systems are ecological ones, and under the best of conditions the task would be formidable. How would you organize enough information about 62 million acres to predict the environmental and economic impact of hypothetical alternative actions? Yet much of the data did not even exist, let alone computer programs to transmute data into all the information needed for such major policy decisions.

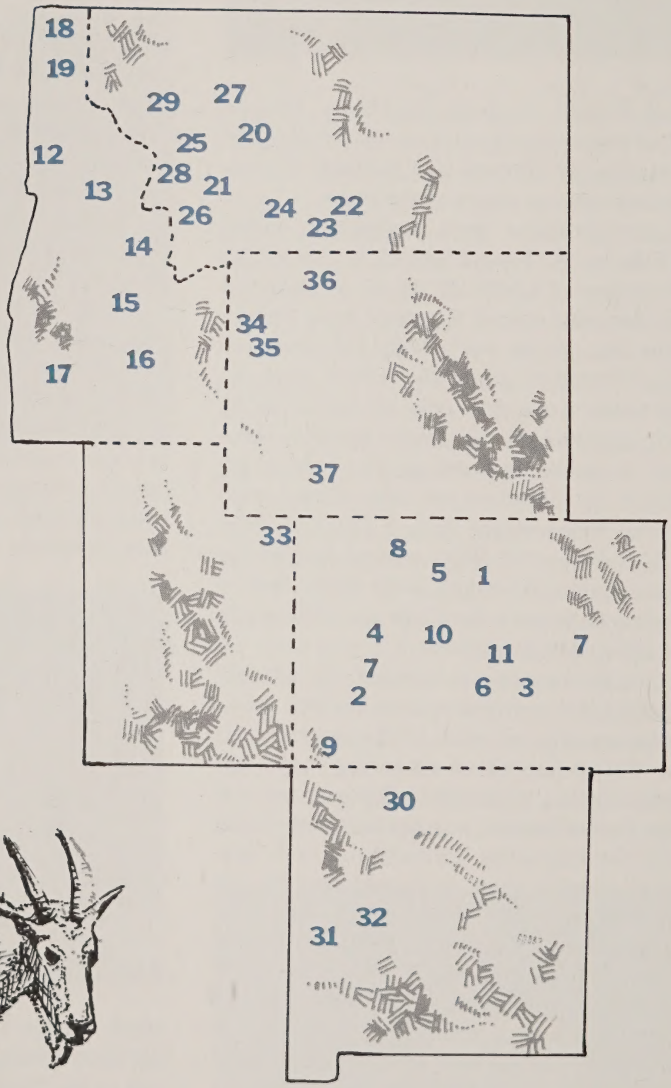
Because their natural systems tend to be immense, because their people are deeply involved, and because their future depends on the wise stewardship of their natural resources, the Rocky Mountain states must find new ways to make decisions about those resources. They must learn to set conservation objectives that most citizens can regard as valid. They must develop efficient ways to gather, store, and use information about species and systems that should be conserved. And here, where many people feel that public agencies already control more than enough land, they must be alert to protection techniques other than outright public ownership. Does all that sound like a job for The Nature Conservancy? You bet.

As you will read elsewhere in this issue, some of the Conservancy's most dramatic acquisitions have occurred in the Rockies, and some very significant ones are in the works. For imaginative negotiating and financing, for political deftness, for sheer moxie, it would be hard to beat the stories of the acquisition of the Beartooth Ranch, Blackfoot River easements, Mt. Haggin, Wildhorse Island, Silver Creek, Idaho Birds of Prey Area, Mueller Ranch, Ridge's Basin Ranch, or Sevilleta de la Joya. Those nine Rocky Mountain projects, by the way, account for more than 25 per cent of all the acres protected by the Conservancy in over 2,000 projects.

Yet unlike some other areas, the Rocky Mountain region will not be changed substantially by Conservancy acquisitions alone. The land is just too big. What could make a difference, however, are the Conservancy's unique methods for collecting and organizing information about natural diversity. Although they have many applications, these methods are best exemplified in state heritage programs. New Mexico was one of the first

states to sign a contract with the Conservancy to develop a state heritage program, and Wyoming did so last November. Discussions are in progress with other states in the region. For the first time in the Rockies, we have a chance to find out what is really rare here, where it exists, and how well protected it is. Such information could have enriched RARE II. In years to come, it will certainly improve the art of conservation in the Rockies.

The Nature Conservancy in the Rockies



COLORADO

1 **Bunker Hill Placer Preserve.** 90 acres of alpine tundra controlling a small alpine watershed.

2 **Galena Mountain/Mexican Cut.** Broad, water-catching ledges of quartzite and limestone bedrock at 11,000 feet; 420 acres.

3 **Garden of the Gods.** 5-acre buffer parcel on the west boundary of a city park.

4 **Gore Creek Deer Reserve.** Key part of a major mule deer migration corridor; 3.5 acres.

5 **Holzwarth Ranch.** 634 acres of forest and valley meadow; now part of Rocky Mountain National Park.

6 **Mueller Ranch.** 12,000 acres of meadow, forest, canyons; bighorn sheep range. See page 8.

7 **North Star Ranch.** 174 acres of meadow land crossed by the Roaring Fork River. See page 23.

8 **Pierce Property.** 599 acres of canyon land with pine and aspen and a beaver pond.

9 **Ridges Basin Ranch (Bodo Ranch).** 7,100 acres of prime winter range for elk and deer.

10 **War Eagle Claim.** 5-acre scenic area in a small valley in the Gore Range.

11 **Zinn Property.** Ponderosa forest, meadow crossed by Jackson Creek in Pike National Forest; 260 acres.

IDAHO

12 **Idler's Rest.** 33 acres of Douglas-fir and ponderosa pine on a stream.

13 **Nichols Ranch.** 51 acres in the heart of the Selway-Bitterroot Wilderness.

14 **Salmon National Forest (Clear Creek and Panther Creek).** Meadows, ponderosa pine forest, range for elk and moose; 275 acres.

15 **Salmon River.** Heavily forested land along the Salmon River; refuge for mountain goats. 314 acres.

16 **Silver Creek.** 479 acres along a prime trout stream near Sun Valley.

17 **Snake River Birds of Prey Natural Area.** Nesting habitat for over 566 pairs of 14 species of birds of prey.

18 **Two Mouth Lake.** Two alpine lakes, marsh, and forest; 160 acres. See page 22.

19 **Upper Priest Lake.** Glacial finger lake in a narrow valley surrounded on three sides by mountains; coniferous virgin forest. 141 acres.

MONTANA

20 **Beartooth Ranch.** Rugged mountains and long valleys with 12 miles of lake frontage. 27,601 acres.

21 **Blackfoot River.** Series of easements on a river flowing through canyons, forest, and plains. See page 13.

22 **Black-tailed Prairie Dog Town.** 98-acre meadow, habitat for black-tailed prarie dog.

23 **Crazy Mountains.** 4,573 acres of lakes, meadows, grasslands, alpine coniferous forest, and the headwaters of major streams and rivers.

24 **Goodrich Ranch.** 3,677-acre inholding in Gallatin National Forest; grizzly bear habitat.

25 **Lubrecht Experimental Forest.** Mountains and trout-filled streams shaded by coniferous forest; 712 acres.

26 **Mt. Haggin.** 154,000 acres of rugged peaks, valleys, and many lakes, ponds, and trout streams. See page 19.

27 **Pine Butte Swamp.** Swamp, butte, and forest along the south fork of the Teton River. See page 16.

28 **Rattlesnake Creek.** 8-acre vital link in a comprehensive county river park system.

29 **Wildhorse Island.** 2,156-acre island in Flathead Lake, the west's largest freshwater lake.

NEW MEXICO

30 **Edward Sargent Fish and Wildlife Area (Little Chama Valley).** Broad basin of grasslands surrounded by mountain peaks; habitat for mule deer and elk. 20,208 acres.

31 **Gila National Forest.** 376-acre inholding including bottomland, bluffs, and hills along the east fork of the Gila River.

32 **Sevilleta de la Joya.** 221,775 acres of semi-arid land bordered by two mountain ranges.

UTAH

33 **John Jarvie Historic Area.** Winter range for deer and elk. The Green River, a trout stream, flows through the 35-acre property.

WYOMING

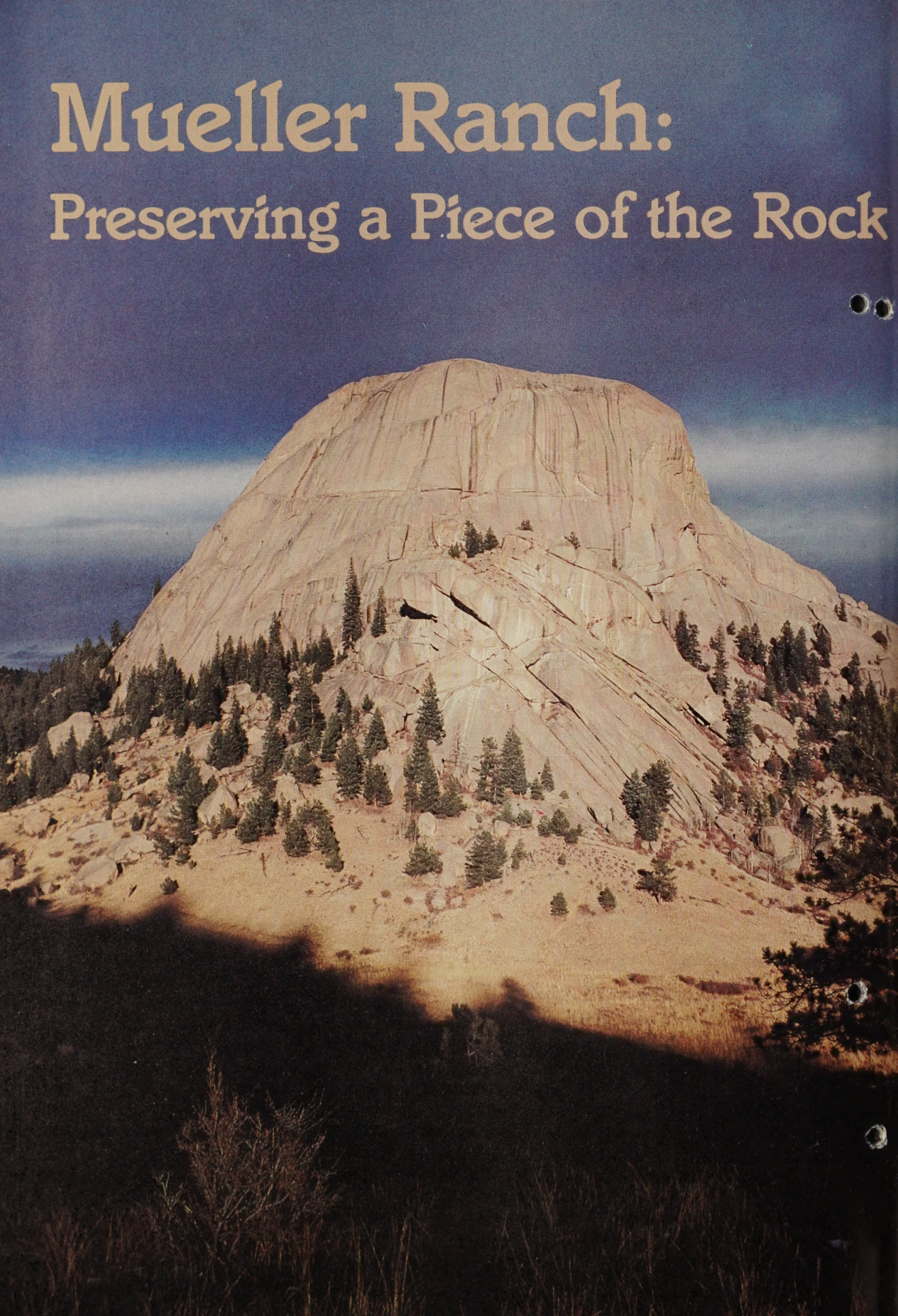
34 **Jackson Elk Refuge.** 133-acre inholding in National Elk Refuge providing winter habitat for 7-9,000 elk.

35 **Jackson Hole Easements.** Series of conservation easements on rich riparian habitat in the Snake River Valley.

36 **Natural Corral.** 500-acre riparian canyon ringed by limestone cliffs. See page 20.

37 **Wilson Property.** Northern desert shrub and meandering creek bottom; 760 acres.

Mueller Ranch:
Preserving a Piece of the Rock



by David Sumner

It was an opportunity one walks into once in a decade, if he's lucky.

On the afternoon of July 8, 1978, Jim Mueller handed me the master gate key to his ranch and suggested I get along with my exploring before the day got away. He also gave me a map showing the few roads and some of the major landmarks.

"You shouldn't get lost," he added, not at all convinced.

For the next two days, the 12,000-acre Mueller Ranch was mine. The spread had been closed to the public more or less since its lands were homesteaded; for the last quarter century it had been a private preserve. Now I was the first member of the press to observe and photograph what may soon become Colorado's newest—and one of its most outstanding—state parks and wildlife areas.

Except for a few ranch hands, I was alone in 18½ square miles. It was as if the calendar had been flipped back to the 1800s and left there. Repeatedly I felt as if I were exploring a rough-and-

Wildlife on Mueller Ranch includes the black bear

tumbling expanse where no white man had set foot. Some of the time, perhaps I was.

On the north part of the ranch I circled through mazes of meadow and forest on moderate, rolling terrain. To the south I dropped into a vivid, disorienting zone of steep canyons, erratic gulches and imposing jungles of rock. Finally, to the southwest, I arrived at the base of Dome Rock.

Were it not for the buff hue of the granite, the site could have been straight from Yosemite National Park—and turret-like Dome Rock the monarch of a scaled down Yosemite Valley. When Theodore Roosevelt passed through here in 1901, he observed that "the scenery is such as to bankrupt the English language." As a photographer I found the same scenery so powerful that I was visually intimidated.

The great rock masses turn one's sense of scale quite on end. From a distance you gaze at the granite knobs, folds and buttresses, and see scrawny trees growing among them. Up close those scrawny trees turn out to be 100-foot Douglas-firs. Gazing upon Dome Rock, you've no notion of its true height. When you work the 800-foot figure off a topographic map, it barely begins to suggest the force of this landmark.

And yet Dome Rock is such a small part of the Mueller Ranch, so I headed on—up Fourmile Creek Canyon, past numerous trout riffles, beaver ponds and inviting side canyons. Pushing through willow thickets, I spooked cottontail rabbits and many small birds. More in the open I paused to photograph wildflowers in diverse, mid-summer bloom: miners candle, penstemon, gilia, paintbrush, several composites, a gentian, a milkweed. Three times I stopped to inspect historic sites: the remains of an old hunting lodge, some mine cabins, a rail corral.

That night I camped in the rain below Dome Rock and felt a fuller solitude than I've known in many of Colorado's wilderness areas.

The account of my July exploration on the Mueller Ranch could go on. At full length it would detail an especially rich and intense blend of land, life, and history made all the more rare by its location. This is not a walled-in, godforsaken spread in the middle of nowhere. The Mueller Ranch is a major wild enclave on the near Front Range—on the low west flank of Pikes Peak between Cripple Creek and Divide. Distance by road to Colorado Springs is less than 30 miles; to Denver, 92. The Mueller Ranch is within two hours of two-plus million people.

Even a decade ago, these 12,000 acres would have been less rare. But in the 1970s in particular, mountain subdivisions have been built over large areas of middle-elevation land in the Front Range. Above Denver—in areas like Indian Hills, Evergreen, and Floyd Hill—development has been primarily residential. Above Colorado Springs—especially beyond Woodland Park—there are a great number of second homes.

Eight subdivisions now border the Mueller Ranch, at least one to each point of the compass. Their direct effect on this 12,000-acre wild enclave has been minimal. For the most part, thick forest, rough rock or steep slopes separate them from the ranch. However, trespassing and especially poaching of big game have become more serious than they were before the subdivisions. This is not only because of more people and closer road access, but also because, increasingly, the Mueller Ranch has evolved into a true wildlife refuge, most notably for mule deer, elk, black bear, and bighorn sheep.

The presence of bighorns triggered the current drive to preserve the Mueller Ranch. A resident band on the spread numbers about 25 animals, but each year, many more migrate onto the property for winter shelter and spring lambing. All the latter are members of the Pikes Peak herd, one of the largest and most healthy in the state. However, without the ranch as refuge, this may well not have been so.

For more than a decade, Jim Mueller has permitted and encouraged the Colorado Division of Wildlife to conduct ongoing bighorn research on his land. Here, in particular, state biologists achieved a major breakthrough in bighorn management—developing a method for controlling lung worm, a parasite that was annihilating whole herds of these shy, communal, wild sheep throughout Colorado.

By 1973 it was apparent that the Mueller Ranch was well on its way to becoming one of the last large, lower elevation bighorn ranges on the east slope. So the Division of Wildlife began shaping plans to purchase the spread, using a combination of state and federal funds. It was not an easy task; to meet his needs, Jim Mueller wanted to effect several land exchanges; the division was unable to enter into such a complex transaction.

Negotiations reached a stalemate and for a time it appeared that the Mueller Ranch would be lost to development.

At this point, The Nature Conservancy became involved. The group's ability to move quickly—much more quickly than state or federal agencies—with a major commitment of money proved critical. Negotiations picked up once again and finally, in March 1978, the Conservancy signed options to purchase the Mueller Ranch for $5.2 million. It was a bargain. Private, state, and federal reviews all verified a much higher, $6.5 million appraisal for the land.

Now phase two of the making of a new state park and wildlife area is underway. Three steps are involved.

First, in early October, the state repurchased almost 5,000 acres of the south part of the ranch from the Conservancy. This rough, rock-strewn tract will become the wildlife area.

Next, early in 1979, the state legislature will be asked to commit funds to purchase the 6,300-plus-acre north part of the Mueller Ranch. The Nature Conservancy presently holds an option on this tract, which will become the state park.

As the third step, the Conservancy has just launched an all-out fund-raising campaign to purchase the final 640 acres. This tract is small in size only. It is the gem of the entire Mueller Ranch containing not only the massive Dome Rock, but also the heart of the bighorn sheep range. Target for the campaign is a modest $360,000, which will cover not only purchase but also a ranch-wide ecological inventory. The key slogan, to be used with the blessing of the Prudential Life Insurance Company, is "Preserve a Piece of the Rock." Deadline is March 1, 1979. Once purchased by the Conservancy, the Dome Rock section will be given to the state as an expansion of the wildlife area. Why such a gift?

The days of simple, straightforward land preservation have long since passed into history. The complexity of our laws have seen to that. In making the gift, the Conservancy will accomplish three distinct goals. To begin with, it will free up over $300,000 in federal funds to help buy the ranch. It will also allow the Conservancy to attach deed restrictions which will insure firm future preservation for Dome Rock and its surroundings. No mining will be allowed and protection of the bighorns will be stressed.

Finally, the gift means a public campaign. The people of Colorado will be involved, voluntarily, in the making and future of their park and wildlife area.

At this writing the Dome Rock campaign is underway and evolving steadily. It is reaching out to a full range of sectors in Colorado: charitable foundations, large corporations, small businesses, citizens' groups and private individuals. In September the first and largest grant was announced: a generous $180,000, fittingly from the El Pomar Foundation in Colorado Springs. Now the Conservancy's challenge is to raise a matching amount by March 1, 1979.

The group's Colorado field office staff is now devoting its energies to this goal—and is involving the public in the process. Two art events—the sale of prints of a painting by Herman Raymond (see box) and a group show of works by over a dozen Colorado artists—are being held to benefit the Dome Rock Fund. Also, there is a grassroots campaign aimed at bringing in 1,000 to 2,000 small gifts from the people of Colorado. The purpose is not only to raise funds for Dome Rock, but also to lay the groundwork for an organization of people who will help set the direction of state stewardship and serve as "watchdogs" for the entire Mueller Ranch in the years to come.

These plans were still in progress when I first explored the Mueller Ranch last July. My purpose then was simply to get the feel of the place—not only of its natural gifts but also of its history. Jim Mueller, the retired president of a large natural gas transport corporation, filled me in ably. He'd put together the ranch over a 15-year span, adding parcels as they became available. Most of his negotiations, it seemed, began in casual conversations with landowners out on this or that back forty where they'd met looking for strays, or patching fences.

As a result, Mueller unraveled a keen, episodic history of doings on his spread. He talked about the White brothers' cabins (both roofless now and beginning to fall in) where a pair of rustlers were hanged. About the old mine down on the south end which never produced an ounce of gold, but which made the owners a very good living from dubious stock sales. About the old stills deep in the bush. About the Jackrabbit Lodge, a posh hunting establishment complete with baby grand piano and imported "ladies" from Denver (it burned in the 1940s; only the chimney remains). About the feud between the Osbornes and the Cargills, about how Duane Werley got bounced off a loco horse, about an equally loco blue grouse that challenged man and beast alike as if they were adversaries in a cock fight, and about how they used to raise iceberg lettuce up on the north end.

"I've barely touched it," he said. "In 25 years I've just scratched the surface." But what Jim Mueller spun out was a fine web of folk history, and out wandering around on his spread I found scattered evidence of its passing.

No matter that the ranch has its share of roads, fences, and line cabins. It is more a wilderness than Colorado areas federally designated as such. This fact seems to overshadow all else that can be said about these 12,000 acres. It adds a dimension of quality, a special aura, to anything one can say about massive rock forms, major animal herds, and the like. The Mueller Ranch has the feel of what all Colorado was like, say in 1850.

"If we preserve Dome Rock and the Mueller Ranch," says Sydney Shafroth of The Nature Conservancy in Denver, "we'll have something that's truly special for this state. Our challenge is a double one. First we have to raise funds for the purchase. Then we have to use the land wisely—even if that means sparingly or lightly. We've a treasure on our hands, if only we know how to care for it."

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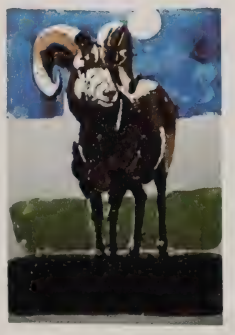


"Bighorn Ram"

300 serigraphs have been produced from a painting of a bighorn ram by Colorado Springs artist Herman Raymond. The signed and numbered prints will be given to donors of $100 or more to the Dome Rock Fund.

Raymond is a nationally recognized watercolorist whose work was recently the subject of a major one-man show at the Philadelphia Museum of Art.

Donations should be made to The Nature Conservancy—Dome Rock Fund, and sent to the Colorado Field Office, 820 Sixteenth Street, Suite 420, Denver, Colorado 80202.

The Blackfoot River

The Conservancy's Easement Program in Montana

by Ken Margolis

Western Montana is mountain country. Dominated by the rugged slopes and peaks of the Rocky Mountains, it is incised by numberless rivers and streams which head up in high country and flow down the east or west face of the Rockies, creating broad, sometimes lush, mountain valleys.

However, the striking feature of western Montana is not ecological variety, but rather the vast scale of the landscape, the purity of the air and water, the abundance of native plant and animal species, the degree to which man's works are in harmony with natural systems. It is these things which send visitors home with a clearer idea of what heaven must be like.

Nature Conservancy projects in Montana have been varied. They have included protection of Wildhorse Island, the largest freshwater island in the western U.S. and crucial winter game range, and the acquisition of Mt. Haggin, an enormous ranch which includes twenty miles of the Continental Divide.

With a few exceptions, the primary path of land conservation in the northern Rockies will probably be on the waterways which form the most intense bands of life in a dry climate. Because we tend to settle by the water, however, stream preservation sometimes conflicts with other social goals. An encouraging development within the past five years has been an experiment which could affect natural area protection not only in the Rockies, but throughout the country.

Private Lands Endangered

The Blackfoot River flows out of the Bob Marshall Wilderness from remote, wooded slopes down to the peaceful, broad Blackfoot Valley. Just east of Missoula, the Blackfoot drains into the Clark Fork River. For its lower fifty miles, it flows through land that has been used for forestry and agriculture for generations. Those uses have apparently not impaired the river system, because the lower Blackfoot still boasts an excellent native fishery and is rich in wildlife—from the small furbearers, to nesting osprey and eagle, to the larger grazers and carnivore species.

Around 1971, a graduate forestry student at the University of Montana in Missoula, Hank Goetz, realized that the prevailing land use patterns along

the river (ranching, timber management, recreation and substantial protection of wildlife species) were in danger. The threat was posed by public use of river lands on private property without any formal arrangements being made. The situation had been tolerable when the population was low and a rancher knew many of the people who used his land to hunt, fish, or just enjoy the river. But with increasing recreational use of the river, landowners became unhappy about gates being left open, fences being cut, and occasional vandalism to ranch equipment.

Goetz decided to explore the legal and actual potential of conservation easements along the Blackfoot River. He believed that, by giving up their development rights, present landowners along the river might be able to protect the lower Blackfoot for all time.

The Conservancy was working at the time with the University of Montana to acquire the Lubrecht Experimental Forest. Goetz got in touch with the Conservancy and arranged a picnic meeting with Huey Johnson (then the Conservancy's Western Regional Director) and several Blackfoot ranchers. There, in a green meadow overlooking a bend in the river, the seed was planted of what became the Blackfoot Conservation and Recreation Management Plan.

A thirty-mile stretch of the river was selected for the program, starting a few miles east of Missoula where the river and the highway diverged, moving upstream to a point just the other side of the Missoula County line. The study area offers a variety of contrasts in topography, setting, and moods. The river flows intermittently through narrow canyons, forests, and plains. Marmot colonies, ducks, osprey, bald eagles and beaver are commonly seen. In season, wildflowers provide a spectacular array of color. In the middle segment, the river cuts deeply into a valley floor forming high benches on each side. Several series of rapids within the area provide a challenge to even the most capable whitewater enthusiasts.

This particular section of the Blackfoot was chosen because it was virtually undeveloped, and because a relatively small number of landowners were involved. In fact, over 75 percent of the area was owned by Champion International and two large ranches.

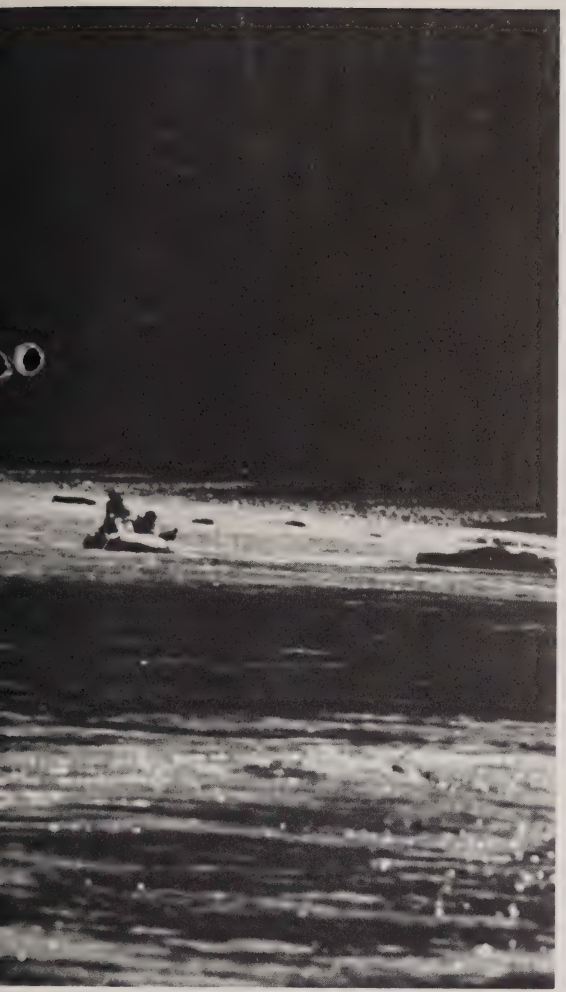
Goetz talked with Blackfoot landowners about his idea, and several of the larger ranchers felt it would be worthwhile to explore the possibility. Goetz was able to enlist the support of Dr. Arnold Bolle, then Dean of the School of Forestry at the University, and Tom Collins, President of the University Foundation. When the Montana ranchers

Marmot

and the University came together, both seriously interested in protecting the Blackfoot, a broad community coalition took shape. Although the program was essentially conceived and designed by the local community, the Conservancy played an essential role from the start. With national resources and a good record in Montana, the Conservancy undertook the challenging task of negotiating and monitoring a series of connected conservation easements.

Through the Bureau of Outdoor Recreation (now the Heritage Conservation and Recreation Service), the federal government was also involved in a very helpful way at an early stage. The BOR representative skillfully helped to enlarge the community coalition, and BOR printed several drafts of the plan that is now being implemented.

An *ad hoc* planning group was formed, representing every major element of the community concerned with the Blackfoot: the major private landowners along the river; representatives of the corporate landowners (Champion International, Burlington Northern, and Milwaukee Railroad), the University of Montana, the local County Commissioners and Planning Board, and the state Division of Forestry and Department of Fish and Game; the president of the local chapter of Trout Unlimited; and several interested citizens. Representatives of the Bureau of Outdoor Recreation and The Nature Conservancy were the only non-local people in the group.



The scenic Blackfoot provides excellent opportunities for recreation

For two years, major public and private interests on the Blackfoot River met together on a bimonthly basis. In a process of explaining, storytelling, brainstorming, arguing and negotiating differences, the group members developed a plan for the Blackfoot. It was a beautiful example of local land use planning: the diversity of the group represented a guarantee that no single interest would dominate. As a consensus began to form, all the parties were encouraged to make reasonable compromises in the interests of the community represented there. At the same time, the presence of BOR and The Nature Conservancy helped broaden the context of the effort. The Conservancy ensured that conservation of the riverine ecosystem was the basis of the entire plan.

Management Program

There is now a management program for this threatened stretch of the Blackfoot River. Its primary objective is protection of the natural, scenic, and recreational integrity of the Blackfoot corridor. The State Department of Fish and Game, with help from Missoula County, is managing recreational use of the river, freeing landowners from the burden of managing public use of their private lands. In return, the owners make specified portions of their property available for managed public use. Of the seventeen public recreation sites within the thirty-mile stretch, thirteen are located on private land.

Meanwhile, the Conservancy is pursuing its program of conservation easements to assure that land uses remain in patterns which historically have proven to be compatible with the protection of a healthy river system. The Conservancy is concentrating its present efforts on the upper eight river miles of the program (the "conservation reserve"), because of its floodplain marshlands, high proportion of raptor nests, and abundance of wildlife.

Ironically, at the time of this writing, negotiations have been essentially completed with all of the major private owners, but donations of several of the easements are awaiting a legally effective promise from the State of Montana that there will be no further development on river lands owned by the state. Because certain state-owned lands along the river are constitutionally mandated to provide income for the State School Trust Fund, that promise has been slow in coming.

At present values, it would cost over $15 million to purchase the river corridor lands included in the program. Yet, so far, the Conservancy's costs have been under $20,000, and they are apt not to be more than twice that at the end of the project. Furthermore, a major segment of a river has now been subjected to land use planning through voluntary agreement rather than through public regulation. The ranchers and wildlife will not be driven out by subdivision, as is happening in the nearby Bitterroot Valley. The public has reasonable and free access to the river, and all this has been accomplished with the expenditure of virtually no tax dollars.

Could the Blackfoot program represent a wave of the future? People from as far as Maine and Alabama have already visited the project, to determine whether the technique might work in their states. A group of ranchers on another major Montana stream have invited Blackfoot ranchers to discuss the program with them. The lesson may be that if a strong community coalition, including major private landowners, can be assembled around a conservation issue, and if a national organization such as the Conservancy offers its resources, grassroots conservation can work without massive spending or restrictive legislation.

Bull elk

The Big Swamp, Many Persons Butte

A local resident's view of Pine Butte Swamp, Montana

"The Big Swamp"

by A. B. Guthrie, Jr.

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Grizzly bears

High on the plains of central Montana, hard by the main range of the Rockies, lies what the county's old-timers referred to as a swamp or a slough. From it rises a rocky eminence now referred to as Pine Butte, though older residents called it and neighboring others the Teton Buttes. The butte, 5,012 feet in elevation, rises 500 feet from its base. Were I to name it, I think I might choose Many Persons Butte, after the Indian manner of personifying animals, for many make use of it.

The old-timers classified the swamp and its immediate area as useless. A tangle of willows, aspens, reeds, slough grass, and other wild growth, the swamp was considered no place for livestock, or for that matter, humans. Either could bog down or sink out of sight. Either could plunge into the channels, the narrow canals, the swimways of beaver whose dams create the pools, for vegetation often spreads a screen over them. Thus the invader would find the footing uncertain, tricky and dangerous, unless he knew routes that few know. Hunters avoided the place. So did nearly all fishermen. The terrain was considered too risky.

So wildlife has gone on with little disturbance. Birds, some rare, nest in the swamp and on the butte. Animals feed largely unseen. Fish laze in their pools, large fish, eastern brook trout, planted or brought there by river flood in years no one remembers. All that is sure is that the eastern brook is a transplant. Come spring, grizzly bears, hungry after hibernation, venture down from the mountains to gorge on the green stuff the swamp supplies. The experts believe that some of them, one or three at least, probably stay there the year round.

My home is just a few miles from the place. We—the swamp and I—are about 23 miles from the county seat town of Choteau. As a long-time resident, I have seen many a season come and go and many a mammal and many a bird find a haven in the swamp or on the butte. A golden eagle soars high over my house, and I wonder if the bird nests on the butte, for eagles' nests have been seen there. I flush a pin-tailed grouse—in my boyhood we called them prairie chickens—and I know the courting ground lies hard by the swamp. A badger waddles about my premises unconcerned, probably a rover from the land below me. Deer, mule and whitetail, graze my acres and the wetlands, too. Coyotes sing at night.

Other people, better educated and more studious than I, have listed the variety of mammals, the kinds of birds, and various amphibians and reptiles. They come to an astonishing total, but even so, I wonder if the catalog is complete. It lists 37 different mammals, 71 varieties of birds, and nine kinds of amphibians and reptiles. It omits fish except for a reference to trout, but I know that freshwater suckers inhabit the waters as well as minnows that I know as chubs.

Some of the creatures I have never seen, or have seen rarely, despite their proximity. Only once did I ever spot that evasive predator, the mountain lion. I have seen bobcats but never a lynx. Both are night hunters. I know the great horned owl, not the short-eared or the long-eared. The gray partridge is a stranger to me. I want to see a jumping mouse and a spadefoot frog.

In winter, fierce winds blow over the swamp and tear at the butte. Snow piles up. The thermometer may touch 50 degrees below zero. The rare visitor, cold in his down coat, his fur cap, his heavy boots and mittens, sees the tracks of animals and marvels that life exists there.

But spring comes finally, and with it the miracle of pasqueflowers, moss campion, dwarf phlox, and wild forget-me-nots. Each has its short day of glory. Then come blue bonnets, harebells, and wild roses, but we are into summer now, and in this almost always ever-blowing country the hot winds turn native grasses yellow and discourage all blooms save a few such as the showy daisy.

Bobcat tracks

Meantime, wildlife has "come to bloom." The merlin and the marsh hawk build their nests. The bobcat finds a place to bear her young. The deer gives birth. And the great grizzly, gaunt from hibernation, comes down from the mountains to feed on succulents. Only the lucky and watchful eye sees him as, taking advantage of what cover he can find, he dares to come out on the plains. He is there, though, and in numbers. By careful count he has been sighted 117 times in the last ten years, and those heedful of his welfare have trapped him now and again and tranquilized him and put a collar on his neck, and follow his fortunes by radio.

Some of these creatures, like the grizzly, are threatened with extinction—the Rocky Mountain wolf, for instance, and the peregrine falcon, once a nester on a nearby butte. An outfitter, long in the country, told me once that the swamp and its surroundings, up slope to the towering presence of Ear Mountain, harbored all the creatures native to the interior northwest, including mountain goats, bighorn sheep, and moose.

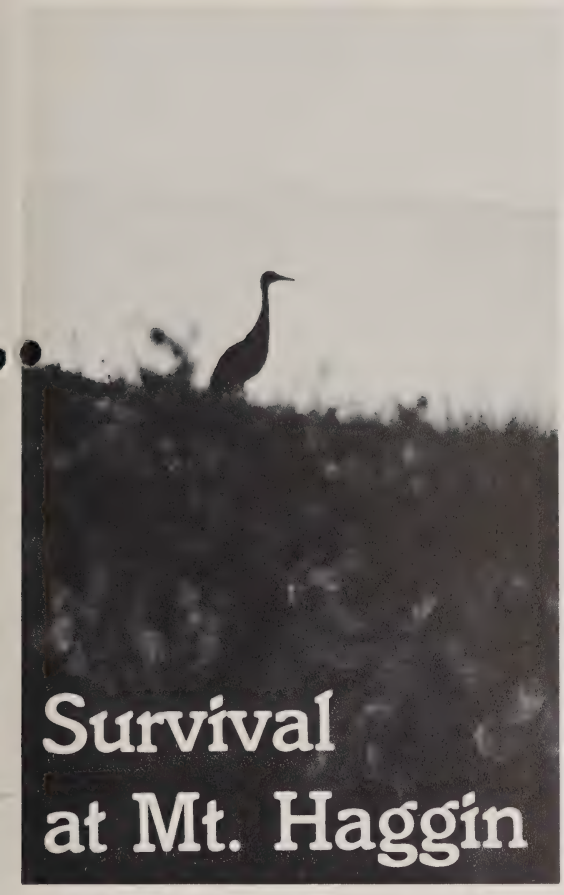
The diversity of life is astonishing, though it can be explained. Consider the climatic zones from butte to swamp—subarctic to alpine, to high plains to marshland, all within this small area, all the chance workings of geology, all the whim of ancient, moving ice.

If diversity doesn't make the place unique—I tend to think it does—then take into account the grizzly. The almost certain evidence that bears inhabit the swamp year-round would make the place unique beyond all doubt. Nowhere else, along all the great front range of the Rockies, does the grizzly leave the mountains to live on the plains.

Off and on I've heard talk of draining the swamp so that the cutter bar and plow can go there and hay be cut and tame seeds planted. What matt[illegible] birds and beasts?

I hope they have their say before ditchers and bulldozers are brought in.

NOTE: As of this writing, The Nature Conservancy has obtained options on almost 7,000 acres of Pine Butte Swamp. A donation of $3 million from the Richard King Mellon Foundation of Pittsburgh to the Conservancy's Land Preservation Fund for first use at Pine Butte will enable us to exercise the options and set aside this magnificent wilderness area.



Survival at Mt. Haggin

by G. Jon Roush

I first got to know the Mt. Haggin ranch in 1964 in the company of a one-armed cowboy named Turk. Turk watched over 30,000 acres of Mt. Haggin land and 6,000 cows. He could rope, build fences and, with his horse at an easy gallop, roll a cigarette with his one hand. I had recently moved onto a neighboring ranch, and for two summers we helped each other, while I tried to learn everything I could from Turk's stream of stories, advice and invective.

First and last we talked about survival, the only topic that really fit the landscape. Located near Anaconda, Montana, the Mt. Haggin ranch comprised 154,000 acres of awesome scenery. The sky-high land, ranging from 6,000 to 11,000 feet above sea-level, includes 19 miles of the Continental Divide, about 60 miles of superb trout streams and 20 mountain lakes. Yet the land is as harsh as it is beautiful. Elk, moose, bear, mountain goats, mountain lions, sandhill cranes, golden eagles, several species of hawk, wolves, coyotes—all feel more at home there than I ever will. Snow often buries the fences by Christmas, and the coldest recorded temperature in the area is —70°. Whenever we came to a new part of the ranch, Turk was sure to tell me where to find shelter and his cache of food and coffee in a blizzard.

Usually shelter was a deserted log cabin, built by one of the dozens of homesteaders who first settled the ranch. In those days, logging camps on the slopes provided wood for a school, store, stagecoach stop and slaughterhouse, as well as wood to fire the huge copper smelter erected by the nearby Anaconda Company. Unfortunately, smoke from that smelter carried arsenic, which poisoned the vegetation for miles around and tens of thousands of cattle and sheep that ate it. By 1920 most of the settlers had sold out to Anaconda and left. Later the Company succeeded in removing the arsenic from its smoke and consolidated the diverse homesteads into the Mt. Haggin Livestock Co. The land will soon reclaim the cabins.

Yet after listening to Turk, I think something else, in addition to the Company arsenic, discouraged those oldtimers. I think the snow had something to do with it, and my evidence comes from stories of people who did not leave. They were part of Turk's memory but legend for me: men like Porcupine Shorty, who went into the mountains every fall with a rifle, traps and 40 pounds of dried beans and came out again every summer, more antisocial than ever. Or like bachelor Joe Toussaint, the only one of the settlers who was savage and obstinate enough to refuse to sell his land to the Company, preferring to live alone and fight the winters 30 miles from town. He was so crippled that he slept sitting in a chair every night of his last 12 years, afraid that if he lay down, he would be unable to get up again. But when he died in 1950, his ranch was intact.

It is hard to say who were the better survivors. I imagine many of the homesteaders were relieved to sell their land, taking the money to buy some place less formidable. Only extraordinary people freely chose to be intimate with the wilderness. But their time was brief, and my generation has not replaced them.

As for the Mt. Haggin ranch itself, Ken Margolis has told its later history in the Winter, 1977, *News*. Through the Conservancy's work, the U.S. Forest Service and the Montana Fish and Game Department now administer 76,000 acres for the true survivors, the wildlife. The Conservancy holds an option to buy another 60,000 acres, and the rest remains a ranch under the conscientious care of its current owner.

And Turk? He is hanging on. I ran into him in a bar last summer in Wisdom, Montana. We had a beer, and each said that the other looked older. Beyond that, we did not have much to talk about.

Natural Corral

by Robert Michael Pyle

The Natural Corral is a well known geographic feature of northwestern Wyoming, a biological enclave held in the highest regard by scientists of the state colleges and universities. Situated north of Cody and east of Yellowstone, it borders the Shoshone National Forest on three sides. Not far into the Forest on the west begins the North Absaroka Wilderness Area. On the eastern flank of the Natural Corral, private ranchlands roll away toward the high plains.

As Northwest Land Steward, I was fortunate to have the opportunity to visit this remote preserve. Negotiating the stony access road in an inappropriate sedan rented in Cody, I found my way with the aid of a notorious local ranch hand known as Paint Creek Annie. When the road became blocked by boulders and streams, I continued on foot.

Beginning in the lush, riparian canyon bottom with its clear, rushing creek, I followed the trail upstream between the towering limestone walls which define the "corral." Kestrels dropped in and out of nesting clefts in the white cheese-like rimrock, as tanagers and many other songbirds called in the cottonwood tops below. A profusion of asters, thistles, and other native wildflowers furnished nectar for an impressive variety of butterflies, including the cinnamon-and-silver great spangled fritillary and the scarce pale crescent-spot. Every few yards, a different aspect of the corral's natural complexion was revealed.

At sunset I neared the head of the canyon where dense aspen and evergreen woods run up to the last rimrock. Above this, a broad plateau, blue with blooming lupine, stretches away to the border of the National Forest. From above the head of the canyon, I could see the whole of the Natural Corral receding below me. Lazuli buntings flew from fir-top to fir-top, singing melodiously, as chickarees (the native western red squirrel) called beneath them. This vantage revealed the really remarkable variation which distinguishes the Natural Corral far beyond its status as a scenic landmark. For this calcareous slit breaches the ecotone between the limestone Absarokas above and the red sandstone hogback at the very base of the Rockies below. From the same spot on the preserve, one can see clearly both arctic-alpine rockslides on the west and arid red-desertland on the east. A similar range of features occurs on the preserve itself: on the one hand, the visitor finds base-loving plant communities among the limestone rimrock, on the other an acid bulrush marsh nurturing plants and insects rare in the northern Rockies. Beside the marsh drops a postcard waterfall, its banks lined with yellow monkeyflowers and ferns. Extensive but essentially unstudied anthropological remains are known to occur here, and a cave system said to contain more than forty miles of passages underlies the preserve.

The ecological uniqueness of the preserve lies

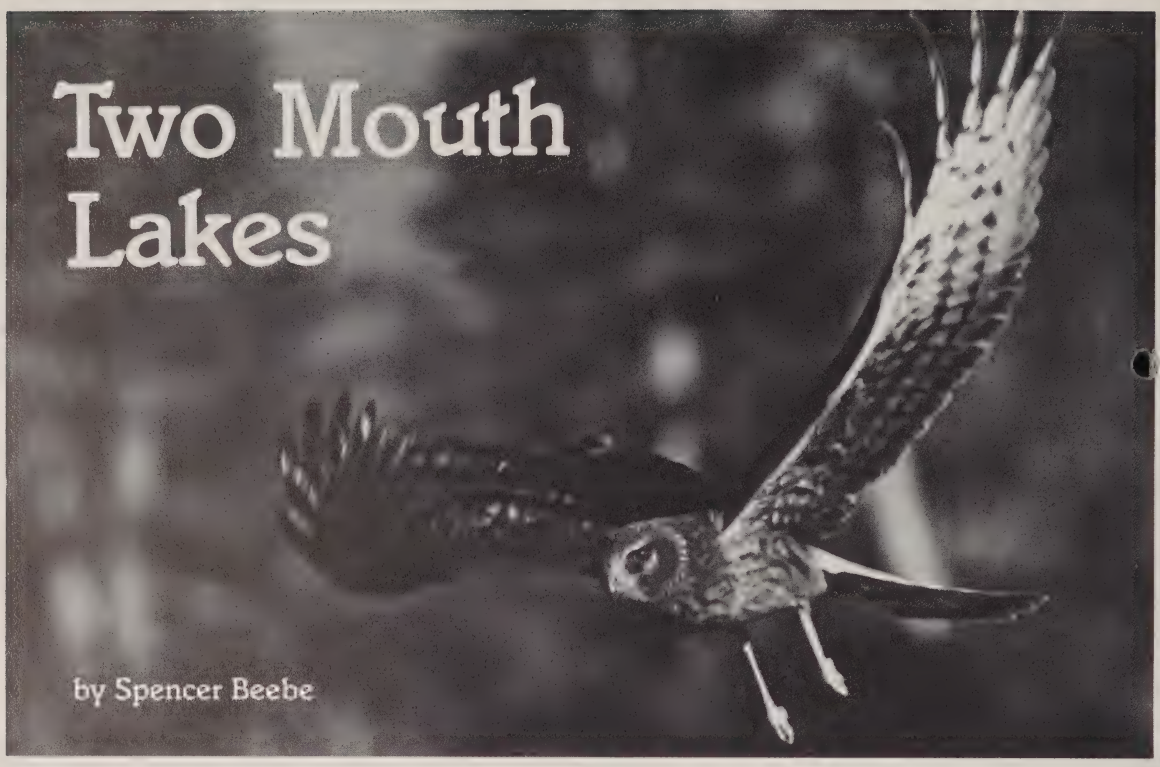
not in the presence of one or two endangered species, although some may indeed occur here, but rather in an exceedingly high diversity of natural phenomena elsewhere rare or depleted. That such an undisturbed condition should have persisted in the lower fringes of the Rockies—for the most part highly altered by agriculture, development, or mining—is remarkable in itself. Seldom in my long experience in the Rocky Mountains have I visited a single canyon so rich in native organisms but so free from alien, weedy species.

That this is so is the result of the judgment and foresight of Mr. Gordon H. Barrows. As its name connotes, the Natural Corral has always been rather isolated from external influences and impacts. As such, it makes an eminently defensible preserve. The long-term influence of stock grazing the Corral is demonstrably much less than on some surrounding private and federal lands. When he acquired the ranch comprising the Corral, Mr. Barrows decided to exclude cattle altogether as being unsuitable for its limited grasslands. He preferred to encourage native grass-feeding animals. The mule deer and the satyr butterflies I observed on the grasslands of the preserve attest to his success.

In 1977, Mr. Barrows gave The Nature Conservancy a one-tenth undivided interest in approximately 500 acres of the Natural Corral, to be increased by one-tenth per year until the full title vests in the Conservancy by 1987. The Barrows' log home, and the scenic forty acres on which it lies beside a small lake, have been bequeathed to the Conservancy and may someday house researchers or a steward. The gift has been designated the Harry C. Barrows Memorial Preserve, in honor and memory of Gordon H. Barrows' father.

Stewardship of the Natural Corral calls for limited public visitation while master planning is undertaken. This will never be a high-density use site, due to the fragility of its many communities and the beneficial effect of solitude on resident wildlife. Carefully planned research and educational activities are seen as the probable, most suitable uses in the future. In the meantime, extensive biological inventories will be conducted to reveal the extent and precise character of the resource. Both the donor and the Conservancy want the Natural Corral to remain forever undisturbed, as it is now—a natural punctuation mark in the changing Rockies front.

Two Mouth Lakes



by Spencer Beebe

Some of America's most spectacular mountain wilderness is sequestered in the northern Rockies, and a disproportionate share of this great resource is in the Idaho batholith—the rugged peaks, alpine lakes, montane forest, and wild rivers of north and central Idaho. The Conservancy has played a small but important role in protecting the integrity of some of this magnificent country.

Historically, the Conservancy's protection programs in Idaho have been focused on small private tracts of land—"inholdings"—in the midst of the larger public domain of primitive and wilderness areas, national parks, wildlife refuges, and wild and scenic rivers. A good example of the Conservancy's work is Two Mouth Lakes, a 160-acre private inholding in the Selkirk Crest area of the Kaniksu National Forest.

The tract, which includes two alpine lakes, marshland, and fir and pine forest, came on the market in 1974 at the height of the early land development era in northern Idaho. The U.S. Forest Service and the Idaho Department of Fish and Game, which manage the surrounding land, were eager to purchase this integral part of the American outback before it was lost to indiscriminate development.

There was no immediate source of funding, however, and the government machinery was too slow to keep pace with potential development buyers. Working with the Conservancy's Northwest Office, the Forest Service developed what is known as a tripartite exchange to acquire Two Mouth Lakes, whereby funds for the purchase would be derived from the sale of timber cut from National Forest lands. The county commissioners, whose timber sales receipts would be affected, were nevertheless happy to see the land protected and approved the transaction. Louisiana Pacific Corporation, the timber buyer, recognized the land's scenic, wildlife, and recreational values, and fully cooperated. With a loan from a line of credit, the Conservancy purchased Two Mouth Lakes and resold the land to the Forest Service 14 months later when funding was finally secured.

The Conservancy has acquired a number of similar private inholdings in Idaho: along the main and middle forks of the Salmon River in the Idaho Primitive Area; near Bighorn Crags on Clear Creek in the heart of the Selway-Bitterroot Wilderness Area; on Alturas Lake and Upper Priest Lake; and in the Craters of the Moon National Park. Since 1957, over 6,150 acres of private inholdings throughout the state have been identified, purchased, and protected by Conservancy members and staff. Left open to private purchase, these small private lands could have been subdivided and developed in ways inconsistent with a greater public purpose, making it impossible to protect the surrounding land at all.

North Star Ranch:

A Unique Approach to Stewardship Planning

by Robert Lewis and Sydney Shafroth

Over fifty people were present in the second floor hearing room of Pitkin County's Courthouse in Aspen that evening. It was early February, 1978, and they had gathered to begin to plan for the future of the North Star Ranch, which several months earlier had been purchased by The Nature Conservancy.

The spectacular 175-acre ranch is located just east of Aspen. Large open meadows, interrupted only by the snake-like meander of the Roaring Fork River and larger stands of mature aspen trees, make the North Star Ranch a natural enclave within the city limits of Aspen.

The unparalleled beauty of North Star's open meadow landscape is complemented by the diversity of plants and animals on the property. The land is critical winter range for a 75-member elk herd, and on any given day in the winter scores of elk can be sighted.

Bird life is also abundant on the property, with 56 identified species. Great horned owls hunt at night for meadow mice. On the ground, robins and flickers search for worms and insects, while violet green swallows soar gracefully hundreds of feet above the valley floor in quest of insects. Red-winged blackbirds, mallards, blue-winged teal, snipe, and killdeer are all found along the shores of the Roaring Fork. Many waterfowl winter and nest within this riparian system.

North Star Ranch is truly a sanctuary for wildlife. It was therefore quite appropriate that Pitkin County had hired ecologist Bob Lewis to coordinate the inventory and management planning efforts for the ranch, which would eventually be sold to the County by the Conservancy. Long before any funds for purchase of the North Star Ranch had been authorized, the County Commissioners had committed several thousand dollars to begin to plan for North Star's future—a rather unusual order for such events to take place.

Bob Lewis had decided to take his mandate to the people through public hearings. Although the majority of people attending were simply interested citizens, the Aspen Wilderness Workshop, the Sierra Club, the Pitkin County Parks Association, the Colorado Division of Wildlife, the Aspen Center for Environmental Studies, the Aspen Kayak School and The Nature Conservancy were also represented.

An initial environmental assessment had been completed by Lewis, and this formed the initial focus for discussion. It was almost immediately concluded that a more in-depth study was needed, and a Resource Inventory Committee was established. The team was headed by Lewis and included Mark Fuller, Pitkin County's Environmental Coordinator; Tom and Jody Cardemone, naturalists for the Aspen Center for Environmental Studies; Jan Faulkner, biology teacher at the Aspen High School; Stephen Berwick and Kathleen McNamara, both of Yale University; Jon Mulford, an Aspen attorney and trustee of the Conservancy's Colorado Chapter; and Diane and Jim Smith, former owners of the North Star Ranch.

The majority of people attending the first hearing agreed that, if possible, the North Star Ranch should be maintained in its present state. Some, however, felt that specified minimal development could occur, in order to allow public use and enjoyment of the area. Protection of the wildlife and ecosystems was seen as critical, and the best way to accomplish such a protection would be through the employment of a resident naturalist. Recreation would be trail-oriented (hiking, bicycling, and cross-county skiing), but would also include use of the Roaring Fork River for activities such as kayaking and fishing.

The discussions in February and at a later hearing in mid-April covered the gamut—from total protection with wildlife refuge status to the design

A variety of habitats are available to elk, deer, small mammals, and birds.

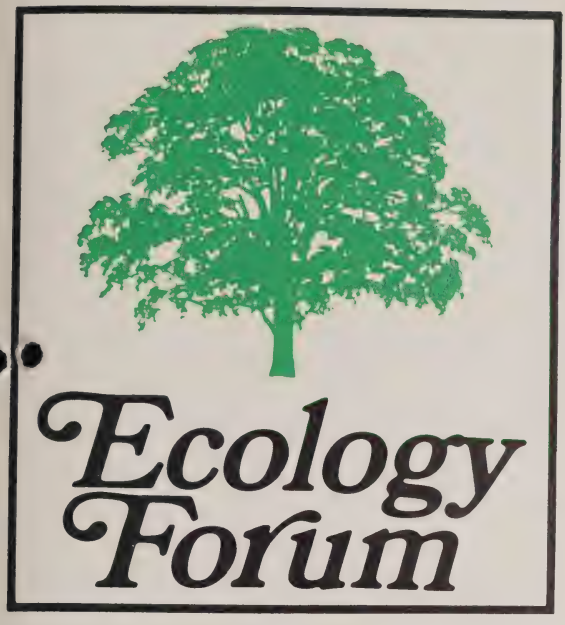
Limited cross-country skiing in some areas is being considered; however, the needs of the elk herd must come first.

of a bicycle path and a community garden. The people of Pitkin County were participating first-hand in the decision-making for a piece of land which they would eventually own.

Perhaps this process could have happened only in Aspen, where the financial resources are extensive and environmental concern remains high. It seems, however, that the process also evolved as a result of the remarkable changes which Aspen has experienced during the last century. Jim and Diane Smith have spoken of the traumatic cultural changes evidenced in turn by "the Ute tipi, the Silver Magnate's Opera House, the handcrafted ranch houses, the intellectuals' music and educational facilities, the sportsman's ski slopes, and now the totally enclosed million dollar pleasure domes." The changes geographically have been even more rapid and shocking, with most of Aspen's waterways now urbanized.

Somehow North Star Ranch has survived this onslaught. According to the Smiths, "Even in Aspen's mining days, with a population of 15,000, this land remained primitive and a sanctuary for wildlife." North Star Ranch was threatened, however, with massive "pleasure dome" development. It was saved by the people of Aspen and Pitkin County, and their continuing concern will insure it proper stewardship.

Something quite unique and creative occurred with the North Star Ranch. Much of what The Nature Conservancy has sought on a national level in regard to inventory and stewardship planning has begun to evolve naturally there. Some of this stems from the public's love for the property and concern for its future. But most of it is an outgrowth of the forum which Pitkin County and Lewis provided for involving the public in the planning and decision-making. The effectiveness of the management plan, still to be formulated, will determine if thousands of species of invertebrates, hundreds of species of plants, and nearly a hundred species of vertebrates, including man, can co-exist on the North Star Ranch.



No. 30
by Phillip M. Hoose
Protection Planner

LEAVING WATER IN WESTERN STREAMS

The Colorado River watershed provides a sobering example of the vastness and complexity of a potential water problem in western states. About 13.5 million acre feet of water flow through the Colorado River each year. Seven surrounding states and Mexico together can legally claim the use of 16.5 million acre feet annually. The region has been getting by because the mountain states have not been using all the water to which they are entitled. Recently, however, the desert states have increased their demand on the watershed, and the mountain states have responded by pressing for dams and pipelines to divert their full claims from the south before it's too late.

Because water from numerous federal projects is so cheap, there is as yet little incentive to actually conserve water. To the contrary, many western commentators have observed a "water grab," a rush to get projects built before the water runs out. In the clamor, voices calling for the protection of plants and animals are barely audible. And it is impossible to protect aquatic or riparian plants and animals once a stream bed has run dry or water tables are depleted.

For legal reasons, possession of senior rights for water usage in western states is nearly as important as outright ownership of land, through which a river or stream runs. The Nature Conservancy chapters and field offices in the west, developing techniques similar to those used to protect land, are beginning to negotiate for these water rights. David Harrison, Colorado Chapter Chairman, has been particularly active and innovative in this effort. A practicing attorney in Boulder whose specialty is water law, Harrison eventually hopes to help create a state-operated "water preserve system," similar to nature preserve systems in the midwest, into which water rights could be dedicated in order to leave water in streams. As a way of beginning, the Colorado Chapter is purchasing senior water rights and reselling them to the Colorado Water Conservation Board for management. To understand what the Colorado Chapter hopes to accomplish, it might be useful to look at some basic principles of water law as it works in the west.

Water Law

Generally, the west has rejected the common law doctrine of *riparian rights* in favor of the *prior appropriation doctrine*. Instead of declaring that the right to use water is an incident of land ownership, which cannot be lost by mere disuse ("if the water flows through my land I own it, no matter what I decide to do with it"), the prior appropriation doctrine holds that a right to use water was obtained when someone, generally long ago, simply took water and applied it to a "beneficial" use ("I hereby claim this water to irrigate my fields."). If users compete for the same water, it's first come, first serve, or "first in time, first in right." Thus, at a given point on a stream, a *senior* water right is both the oldest claim and the one with the most authority. If there is a shortage of water, there is no sharing: the senior right-holder gets his full flow first, and the junior right-holder gets what, if anything, is left.

Someone merely trying to leave water in a stream runs into many problems. First, a "beneficial" use has been interpreted by courts as an *economic* use, for matters such as irrigation or industrial or municipal water supplies. Secondly, it is hard to change a water right from one use to another. In Colorado, you must show the Colorado Water Rights Court that the change will not injure other water rights. To do this, you must limit the amount of water to be used for another purpose to the amount historically diverted and consumed for the first purpose. In other words, if you seek to leave in a stream water which has traditionally been taken out to irrigate crops, you must restore no more than the amount lost to evaporation and transpiration from the irrigated croplands.

How does a junior water right at Point A compete with a downstream senior right at Point B?

If the downstream senior right holder is short-changed, he places a call to the Water Commissioner, who sends down the allowable claim (frequently measured in hundredths of cubic feet per second) to the senior holder. Thus, seniority is important not only at any given point, but also in relation to the entire stream. The trick, if one is trying to protect biota, is to find a "pivotal right" in the stream; that is, an old claim to a stretch of critical habitat between diversion ditches.

It is within this context of water usage laws in the west that the Conservancy is establishing a program with diversified approaches to the water conservation problem. One example is the purchase of the G. Berkely Ditch in Colorado. In 1862, a farmer named Berkely filed a claim to divert 15 cubic feet of water per second (cfs) from Boulder Creek—which flows from the peaks of the Colorado Rockies through the City of Boulder and down into the plains—into a drainage ditch to irrigate his fields. This senior water right at G. Berkely Ditch was confirmed by District Court decree in 1882, but, because the owners used very little of their water right for irrigation over the years, the same court took away all but one cfs in 1924. The present owners of the ditch are the successors of the original claimants. They are willing to sell their senior water right to The Nature Conservancy for the appraised value of $15,000. No land is involved in the transaction. (This is possible because in Colorado, as in some other western states, water rights are real property, and are just as negotiable as land). The Conservancy will transfer the water right to the Colorado Water Board (CWCB) to be held in trust for the Colorado State Division of Wildlife. CWCB will manage the right, and a committee of the Colorado Chapter will monitor the management for TNC. There are no real estate taxes on the water right.

The transaction is relatively complex and will require two lawsuits; one to clear the title of the water right and one to assert the right to legally change the type of use from irrigation (the "beneficial" use) to in-stream use. The Conservancy will seek to clear the title, and the State of Colorado will bring the second action, with legal assistance from the Conservancy's Colorado Chapter.

Implications

The precedential value of the G. Berkely Ditch purchase is potentially enormous. Although the 1 cfs that will remain in Boulder Creek if the transaction succeeds is barely enough to move food and oxygen, it nevertheless represents a foundation upon which the Conservancy's Colorado Chapter, Colorado Trout Unlimited (TU), and the State Division of Wildlife can begin to build their "minimum stream flow project."

The project members hope to acquire rights on unappropriated sections of mountain headwaters and to negotiate for pivotal rights on fully appropriated streams. Diversity will be the key. The program will seek to preserve a complete array of community and habitat types in order to protect as great a diversity of life forms as possible. Colorado Wildlife has already budgeted $225,000 to acquire water rights next year. It recently spent $250,000 to acquire rights to leave water in Hunter Creek, where a massive Bureau of Reclamation project had threatened to suck the stream almost dry.

The joint minimum stream flow project has been quite innovative thus far. For example, an arrangement has been worked out with the City of Boulder and with downstream farmers to keep water in Boulder Creek as it flows through riparian habitat during very dry periods. Typically, the City releases a specific quantity of water from an upstream reservoir in order to satisfy downstream water rights. The claimants normally divert this water into their ditches at a point above the stream's passage through a stretch of important habitat, so that barely a trickle reaches the wildlife downstream. The new agreement provides that this water will now be allowed to flow on past the habitat to a downstream reservoir, where it will then be drawn for irrigation.

The city is willing to push the matter even a step further. When there is plenty of water in the stream, the city will "exchange" water rights. That is, the water will be released to downstream senior rights holders from the lower reservoir, instead of from the stream above. The downstream farmer does not need his flow when there is already plenty of water in the stream. The unused in-stream right will be transferred to the city, enabling the city to hold water in the upstream reservoir for release during a dry period. In other words, the downstream farmer will still receive his legal diversion, but not from the stream. An extension of this strategy involves persuading the city to rotate its reserve water around for instream purposes when it is not needed for emergency drought supplies.

These various schemes, and the many others developing in Colorado, require that water rights be severable; that is, that they may be bought and sold apart from the land on which water is used. This severability does not exist in all western states, but there is a growing effort to develop strategies to accommodate all western water laws.

(Continued on page 30)

California

DESERT TORTOISE PRESERVE—Addition—(Kern County). The 1,280 acre property is part of an exceptionally diverse portion of the Mojave desert ecosystem of over 45 square miles designated the Desert Tortoise Natural Area by the Bureau of Land Management. The concentration of desert tortoise within this area is uniquely high (average of 200 per square mile). Also found are the rare Mojave ground squirrel and several protected reptiles including the banded gecko, desert iguana, long-nosed leopard lizard, desert horned lizard, and rosy boa. Over 160 species of vascular plants are found in the preserve area. Management of the area will be the responsibility of the Southern California Chapter.

SANTA CRUZ ISLAND (Santa Barbara County). The Conservancy has acquired title to 55,000 acres on the largest of the Channel Islands which are an off-shore extension of the Santa Monica Mountains. The island is rugged and topographically varied with steep coastal cliffs, sandy beaches, rocky coves, high rugged mountain ridges, and a long, protected central valley. Because of the isolation and limited use of the island, it exists as a preserved microcosm of the ecosystems found on the mainland, while also providing habitat for no fewer than 20 rare and endemic plants and animals. A species of gray fox, endemic to the Channel Islands, is found in abundance on Santa Cruz Island along with seals, sea lions, and uncommon elephant seals. The area also includes some 3,000 well-preserved archeological sites. Fund raising for the purchase and stewardship of the island has been underway since early last year and public use and management programs are being developed. Management of the preserve is the responsibility of the California Field Office until a preserve manager can be hired and a management committee selected.

Colorado

MUELLER RANCH (Teller County). The first acquisition in a series of transactions that will ultimately preserve the 12,000-acre Mueller Ranch along the western flank of Pikes Peak, this 4,982-acre property, the south ranch, will be transferred to the Colorado State Division of Wildlife. A permanent herd of bighorn sheep lives on the property and a large part of the Pikes Peak herd annually migrates to it. For more information on this project, please refer to page 8.

Idaho

BIRDS OF PREY (Ada County). A 253-acre inholding in the Bureau of Land Management's Snake River Birds of Prey Natural Area, the property is critical feeding ground for the densest nesting population of birds of prey in the world. Over 263 pairs of 14 species—endangered peregrine falcon, golden eagles, prairie falcons, ferruginous hawks, bald eagles, burrowing owls, great horned owls, osprey, marsh hawks, red-tailed hawks, American rough-legged hawks, and American kestrels—are found in the area. The rugged canyon of the Snake River, with rocky ledges and pinnacles, provides excellent nesting habitat. The property will be held by the Conservancy with a resident preserve manager under the supervision of the Northwest Office.

Illinois

NORRIS NATURE PRESERVE — Addition — (Kane County). Directly across the Fox River from the forested section of the preserve, the 46 acres of Ferson's Creek marsh and fen bring the total size of the preserve to 119 acres. This high priority area is considered by the Illinois Nature Preserves Commission to be a rare type of wetland. Fed by cold calcareous springs, the marsh provides habitat for the rare small fringed gentian. The property, a project of the Fox River Conservation Union (a program of the Illinois Chapter), will be transferred to the St. Charles Park District and dedicated under the State Nature Preserve Act.

Indiana

BERNS-MEYER WOODS (Pulaski County). Designated by the state as a Classified Forest in 1933, the 20-acre area has been managed by the donors, V. R. and Janet Meyer and Orville and Wyoma Berns, as a protected and educational area. A wide variety of soils produce a great diversity of plant species of both upland and bottomland forest types. Special species include ginseng (*Panax quinquefolius*), orangeroot (*Hydrastis canadensis*), purple fringed orchis (*Habenaria fimbriata*), and swamp saxifrange. Management of the area will be the responsibility of the Indiana Chapter until the property is transferred to the Indiana Department of Natural Resources. It will be a Dedicated State Nature Preserve.

Maryland

FISHING BAY (Dorchester County). Consisting entirely of undisturbed tidal shrub marsh, the 1,545-acre area has extensive frontage on the Nanticoke River and Pokata Creek. Identified by the U.S. Fish and Wildlife Service as the best waterfowl marsh in Maryland due to its size, variety of habitat, and diversity of species, the area is a very good nesting area for diving ducks. The property fills a gap between the State of Maryland's present holdings and other marsh managed by the State. It has been transferred to the Maryland Department of Natural Resources for management.

MERKLE WILDLIFE REFUGE (Prince George's County). The 362-acres of fields and woodland are an addition to the Merkle Wildlife Refuge, a "no-hunting" waterfowl refuge managed by the State of Maryland. Number nine on Smithsonian Institution's Chesapeake Bay inventory of priority areas, the refuge contains the largest Canada goose nesting ground on the western shore of the Chesapeake Bay. The sellers will retain a life estate on the property. The Conservancy assisted the Maryland Department of Natural Resources in acquiring the area.

Minnesota

LAC QUI PARLE (Chippewa County). Located on the lowest floodplain terrace of the Minnesota River Valley, here widened to form Lac Qui Parle Lake, the 51-acre low, wet meadow is completely surrounded by a state-owned wildlife refuge. Geese, pelicans, and ducks are abundant, and sandhill cranes are seen during migration. The property will be transferred to the Minnesota Department of Natural Resources for inclusion in the Lac Qui Parle Wildlife Management Area.

New York

CLAY PIT POND (Richmond County). Located in the Clay Pit Pond area of Staten Island, this 18-

acre tract is the first Conservancy acquisition in New York City and will be transferred to and managed by the New York State Office of Parks and Recreation as one of the first parcels in the new Clay Pit Pond State Park and Preserve. The 200-acre Clay Pit Area is an area of unusual ecological diversity containing pine barrens, bogs, streams, and ponds as well as mature hardwoods. Geologically it is one of the only areas in metropolitan New York where coastal plain sediments deposited over 60 million years ago are not buried under glacial [illegible]. The parcel acquired by the Conservancy contains a sandy area covered with sassafras, gray birch and cat brier, a stream, and a pond surrounded by a mature forest.

FRANKLIN POND (Nassau and Suffolk Counties). A gift of Lila F. Nields and George S. Franklin, Jr., the 15-acre property is dominated by a pond which is habitat for perch, blue-gills, freshwater clams, and small mouth bass. Great horned owl, red tail hawk, osprey, and great blue heron have been sighted in the area. The acquisition of this area increases the viability of the Cold Spring Harbor Valley assembly which includes St. John's Pond, Uplands Farm, and the Robertson easement, all held by the Conservancy, as well as land owned by the Village of Laurel Hollow, the State of New York, and Cold Spring Harbor Laboratories. The property will be managed by the Long Island Chapter.

Oregon

HART MOUNTAIN REFUGE — Addition — (Lake County). An area of 6,192 acres will be transferred to the U.S. Fish and Wildlife Service for management as part of the 275,000-acre Hart Mountain National Antelope Refuge. The refuge was established in 1936 to provide spring, summer, and fall range for remnant antelope herds which actually winter in Catlow Valley, to the east, and on the Charles Sheldon Antelope Range about 23 miles southeast in Nevada. Today, the preserve continues to protect this habitat for wildlife including 213 species of birds, two of which, the prairie falcon and peregrine falcon, are endangered. Well watered by numerous springs and two year-round streams, this area serves as an oasis in the eastern Oregon desert, attracting bighorn sheep, kangaroo rats, bobcats and rattlesnakes.

Tennessee

TAYLOR HOLLOW (Sumner County). The 132-acre tract is all that remains of a forest type that once covered thousands of acres in the region. The hollow is the only known location in Tennessee for dwarf trillium (*Trillium pusillum*) and blue-eyed Mary (*Collinsia verna*). Other rare or threatened plant species which flourish there include purple sedge (*Carex purpurifera*) and gyandotte beauty (*Synandra hispidula*), species that survive only in undisturbed areas. Additional rare and significant plants found there include three types of sedge, wild bergamot, ramps, and Canada violet. Proposed for National Natural Landmark status and listed by the Tennessee Heritage Program as one of the top five areas in the State, the area is the first in Tennessee to be retained and managed by the new state chapter which is fund raising for the project.

Texas

SEA RIM RANCH (Jefferson County). Recognized by the U.S. Fish and Wildlife Service as one of the top five natural areas along the Texas Gulf Coast, this 9,000-acre area of fertile, productive marshland and natural lakes is used by large numbers of waterfowl following the continent's central flyway. Although not all year-round residents, 13 threatened or endangered species, including river otter, white-faced ibis, Ross goose, golden eagle, American alligator, bald eagle, peregrine falcon, Attwater prairie chicken, red wolf, fulvous tree duck, and osprey, frequent the area at various times of the year. The area will be managed by and transferred to the U.S. Fish and Wildlife Service.

CONSERVANCY OUTINGS PLANNED FOR 1979

The Nature Conservancy, for the third consecutive year, will sponsor tours to two fine natural areas. Four three-day trips will concentrate on the outstanding natural features of the Conservancy's Virginia Coast Reserve and the Adirondack Park in New York. The preserve tours, each of which can accommodate a group of 40 people, are scheduled for May 4-6 and October 12-14 to the Virginia Coast Reserve; and June 1-3 and September 28-30 to the Adirondack Mountain preserves.

For trip applications and additional details, please write to The Nature Conservancy Tours, P.O. Box 3611, Washington, D.C. 20007; or call 202/466-6307. Also, watch for further details in upcoming issues of the *News*.

ON THE BANKS OF THE OHIO

Cincinnati. What does the Queen City have that other cities don't? Well, for starters, it boasts the second oldest zoo in the country . . . THE steamboat of steamboats, the Delta Queen . . . the Cincinnati Reds minus Pete Rose . . . great German beer served with good ol' southern hospitality . . . the celebrated banks of the Ohio River . . . and The Nature Conservancy's 1979 Annual Meeting.

This coming year's meeting will be held September 20-23, with headquarters at Cincinnati's Hotel Netherland Hilton. Events will include an evening cruise down the Ohio, which the 18th Century writer, Andre Michaux, called "la Belle Riviere." Michaux described the giant sycamores that once formed colonnades along the Ohio's banks. Early settlers often used the great hollow trees for shelter until they could build log cabins.

Field trips to Conservancy preserves in both Ohio and Kentucky will be held. Smaller outings will take in areas within the city and county park systems that have been preserved with the help of the Conservancy. A longer field trip will highlight Cedar Bog, a unique association of plants and animals found nowhere else in Ohio. The southernmost alkaline bog in the U.S., the sanctuary supports such relict trees as white cedar, swamp birch, and speckled alder, as well as several rare plants.

Other excursions will include the "Edge of Appalachia" preserves in Adams County, such as Lynx Prairie, Buzzardroost Rock, Red Rock, The Wilderness, and Abner Hollow Preserves. These sanctuaries are representative not only of a diverse array of habitats, but also of the Ohio Chapter's involvement in preserving the state's natural lands. Since 1958, when Dr. Kenneth Hunt, Richard and Lucile Durrell, and the late Dr. E. Lucy Braun introduced the Conservancy in Ohio, the Chapter has been active in establishing some 60 preserves.

Kentucky field trips scheduled for the '79 Annual Meeting will include a visit to the Conservancy's Pilot Knob—the rock escarpment from which Daniel Boone first glimpsed bluegrass country—and Boone Cliffs, a glacial outwash overhung by cavelike cliffs. Members will also be able to see the state's red River Gorge and Natural Bridge State Park, where wind and water have carved out over 100 natural bridges in the Pennsylvania sandstone.

These are only a few highlights of the Nature Conservancy's '79 Annual Meeting in Cincinnati. We hope that you will join us on the banks of the Ohio for a full and varied four-day meeting.

ECOLOGY FORUM
(Continued from page 26)

In 1976, the U.S. Fish and Wildlife Service established the Cooperative Instream Flow Service Group, consisting of scientists and lawyers from four federal agencies, to study the impact of water allocation practices in the west, and to propose strategies for reserving instream flows for fish and wildlife. The Group, centered in Fort Collins, Colorado, has published an impressive and helpful series of "Instream Flow Information Papers" with such titles as "Protecting Instream Flows Under Western Water Law" and "Promising Strategies for Reserving Instream Flows." These and many other publications may be ordered, free of charge, by writing to:

Instream Flow Group
U.S. Fish and Wildlife
2625 Red Wing Road
Ft. Collins, Colo. 80526

A publication list is available.

MASSACHUSETTS HERITAGE PROGRAM ESTABLISHED

The Massachusetts Heritage Program has been established, the seventeenth program of its kind in the nation. The program, which will identify and protect the remaining natural and scenic areas in the Commonwealth, is a joint venture of the Massachusetts Department of Environmental Management and The Nature Conservancy. Commonwealth officials anticipate that the program will have far-reaching effects on future land protection efforts in the state.

COTTAGES AVAILABLE YEAR-ROUND AT MILE HI

Modern housekeeping cottages overlooking a mountain creek are available for rental year-round at the Conservancy's Mile Hi Ranch located 90 miles southeast of Tucson in the Huachuca Mountains. Mile Hi, which stretches across the mouth of Ramsey Canyon, is especially famous for its birds. To arrange a visit or obtain a bird list and other details, write: Mile Hi, Box 84E, Hereford, Arizona 85615.

PHOTOS: Susan Bournique, pp. 4 left, 5 left; Jody Cardemone, p. 24 top; Ray Culter, p. 13; Sue Dodge, p. 5 right; Amos Eno, p. 4 right; Melinda Harrison, p. 24 bottom; Lyn Jensen, p. 15; Robert M. Pyle, pp. 20-21; Chadeayne Roush, p. 19; Allan Schallenberger, p. 17; Sydney Shafroth, p. 8; Bob and Jill Stoecker, pp. 10, 14, 16 top, 18, 22, inside front cover; Marty Stouffer, p. 9 top; David Sumner, p. 9 bottom; Gus Wolfe, p. 16 bottom.

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An individual becomes a Life Member of The Nature Conservancy upon contribution of $1,000 for membership dues.

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NEW CORPORATE ASSOCIATES

A corporation becomes a Corporate Associate of The Nature Conservancy upon contributing between $1,000 and $10,000 annually to the operations of the organization.

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